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### INTERNATIONAL SEARCH REPORT

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	tion searched other than minimum documentation to the extent that								
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l .	ta, CHEM ABS Data								
C. DOCUM	ENTS CONSIDERED TO BE RELEVANT								
Category °	Citation of document, with indication, where appropriate, of the re	elevant passages	Relevant to claim No.						
χ	WO 98 47089 A (CALIFORNIA INSTIT TECHNOLOGY) 22 October 1998 (199 page 6, line 26 - line 30	1							
Х	WO 98 32845 A (BIOINVENT INTERNA 30 July 1998 (1998-07-30) the whole document	7,8							
X	WO 95 22625 A (AFFYMAX) 24 August 1995 (1995-08-24) the whole document		7,8						
		-/							
LAJ Enth	ner documents are listed in the continuation of box C								
<u> </u>	ser documents are toler in the community of EVA O	Patent family members are listed	n annex.						
*A* document defining the general state of the art which is not considered to be of particular relevance  *E* earlier document but published on or after the international filling date  *L* document which may throw doubts on priority. claim(s) or		<ul> <li>*T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</li> <li>*X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</li> </ul>							
<ul> <li>O document reterring to an oral disclosure, use, exhibition or other means</li> </ul>		"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.							
		*8* document member of the same patent family							
	actual completion of the international search  3 January 2002	Date of mailing of the international sear	rch report						
	nailing address of the ISA	1 3/ UZ/ ZUUZ  Authorized officer							
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### INTERNATIONAL SEARCH REPORT

Interr nal Application No
PCT/US 01/40091

	The second secon	PC1/03 01/40091	
C.(Continu	ation) DOCUMENTS CONSIDERED TO BE RELEVANT  Citation of document, with indication, where appropriate, of the relevant passages		
A	B I DAHIYAT & S L MAYO: "De novo protein design: fully automated sequence selection" SCIENCE., vol. 278, no. 5335, 3 October 1997 (1997-10-03), pages 82-87, XP002188179 AAAS. LANCASTER, PA., US ISSN: 0036-8075 cited in the application	1-9	
Α	the whole document  B I DAHIYAT & S L MAYO: "Protein design automation" PROTEIN SCIENCE., vol. 5, no. 5, May 1996 (1996-05), pages 895-903, XP002073372 CAMBRIDGE UNIVERSITY PRESS, CAMBRIDGE., GB ISSN: 0961-8368 cited in the application the whole document	1-9	
P,X	WO 00 23564 A (XENCOR INC.) 27 April 2000 (2000-04-27) the whole document	1-9	

1

### INTERNATIONAL SEARCH REPORT

.ormation on patent family members

Interr nal Application No PCT/US 01/40091

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
WO 9847089	Α	22-10-1998	AU	6965498	A	11-11-1998
	•	22 10 1330	EP	0974111		26-01-2000
			US	6188965		13-02-2001
			WO	9847089		22-10-1998
			US	6269312		
			US	2001032052		31-07-2001
			US			18-10-2001
			U\$	2001039480 2002004706		08-11-2001
						10-01-2002 
WO 9832845	Α	30-07-1998	AU	5771898		18-08-1998
			EP	0988378		29-03-2000
			MO	9832845		30-07-1998
			JP	2001508660	T	03-07-2001
WO 9522625	Α	24-08-1995	US	5605793	Α	25-02-1997
			ΑT	211761		15-01-2002
			ΑU	703264		25-03-1999
			ΑU	2971495		04-09-1995
			CA	2182393	A1	24-08-1995
			CN	1145641		19-03-1997
			DE	752008		05-04-2001
			DE	934999		05-04-2001
			EΡ	1094108		25-04-2001
			EΡ	0752008		08-01-1997
			EP	0934999		11-08-1999
			JP	10500561		20-01-1998
			JP	2001057893		06-03-2001
			WO	9522625		24-08-1995
			US	6180406		30-01-2001
			US	6132970		17-10-2000
			US	6287861		11-09-2001
			US	6291242		18-09-2001
			ÜS	6277638		21-08-2001
			US	6323030		27-11-2001
			US	6319713		20-11-2001
			US	6309883		30-10-2001
			US	6297053		02-10-2001
			ÜS	5830721		03-11-1998
	•		US	5811238		22-09-1998
			US	6117679		12-09-2000
			US	5837458		17-11-1998
WO 0023564	<del>-</del>	27-04-2000	 AU	1119000	Α	08-05-2000
			EP	1157093		28-11-2001
			C C	1 1 7 / 119 1	AI	//